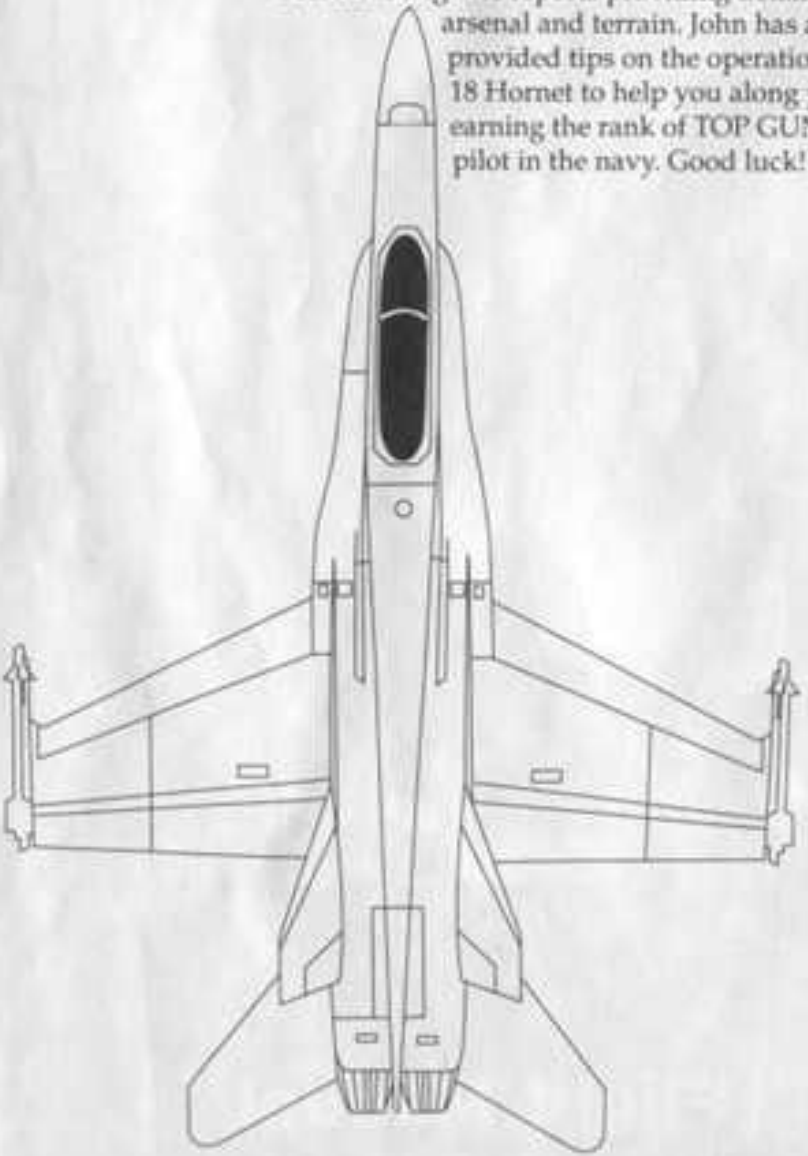
F-18 HORNET

Flight Manual

Welcome to the Atari 7800™ version of **F-18 Hornet**™. Designer John Van Ryzin has incorporated all the challenges of authentic fighter jet operation into this stimulating game. You'll need all the skills of a Top Gun pilot to successfully complete each of the four missions. The first mission is a training run through the China Lake Naval Weapons Station in the Mojave Desert. Then you're sent across the globe to carry out dangerous assignments in hostile territory. In this manual you'll find everything you need to get you started: mission objectives, aerial maps, and Top Secret Intelligence reports providing details of enemy arsenal and terrain. John has also provided tips on the operation of the F-18 Hornet to help you along your way in earning the rank of TOP GUN, the best pilot in the navy. Good luck!



INTRODUCTION TO THE ATARI 7800™ VERSION OF F-18 HORNET™

F-18 Hornet™ is a one-player fighter simulator in which the player pilots a Navy F-18/A Jet through a series of simulated combat situations including carrier takeoffs and landings, bombings, strafings and air combat.

In each of four missions, you are confronted with a variety of opponents and must perform a series of combat objectives in order to achieve top Naval Aviator rank. Prior to takeoff, you are given flight orders from the appropriate Command HQ (depending on where in the world the mission is flown). After receiving your orders, you must successfully take off, fly the complete mission including execution of your primary objective (bombing enemy HQ, dropping supplies, etc.) and finally land your F-18/A at the designated primary landing site. After completing the mission (or crashing, if unsuccessful), you are ranked according to your performance in flying the aircraft, defeating enemy aggressors and completing the primary mission objective.

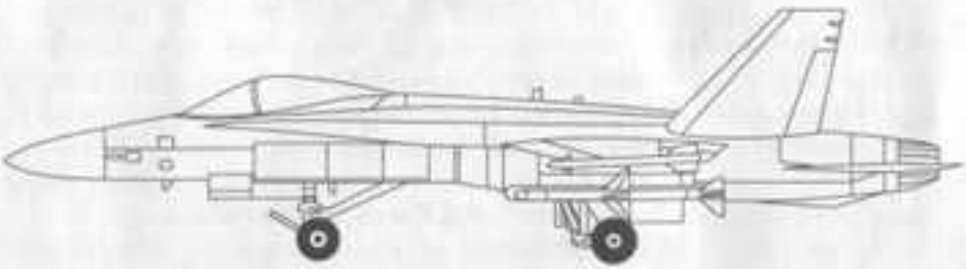
To Begin

1) With power off, insert the **F-18 Hornet**™ cartridge into your Atari 7800™ game system according to the manufacturer's instructions.

2) Plug your 7800™ joystick into port labeled "left controller."

3) Turn power on.

4) Press RESET to begin the game (at any point during the game, press RESET to begin again).



Start

The title page showing the F-18/A Hornet should first appear on the screen. Push the left button on the joystick control to advance to the select mode. A map of the world will appear, and below, instructions to select a mission. Use the joystick to select a mission and press the left joystick button to start it. Keep pressing the joystick forward to read the complete mission orders. To bypass the orders, press the left joystick button.

Controls

F-18 Hornet™ uses both console and joystick control. It assumes your joystick is plugged into the left controller input of your Atari 7800™. ***Note:*** *you must use an Atari 7800 ™ joystick incorporating both left and right fire buttons.*

Console:

Reset-	Starts game.
Select-	Landing gear up/down.
Pause-	Pause game.
Right difficulty-	Eject.
Left difficulty-	Drop payload.

Joystick:

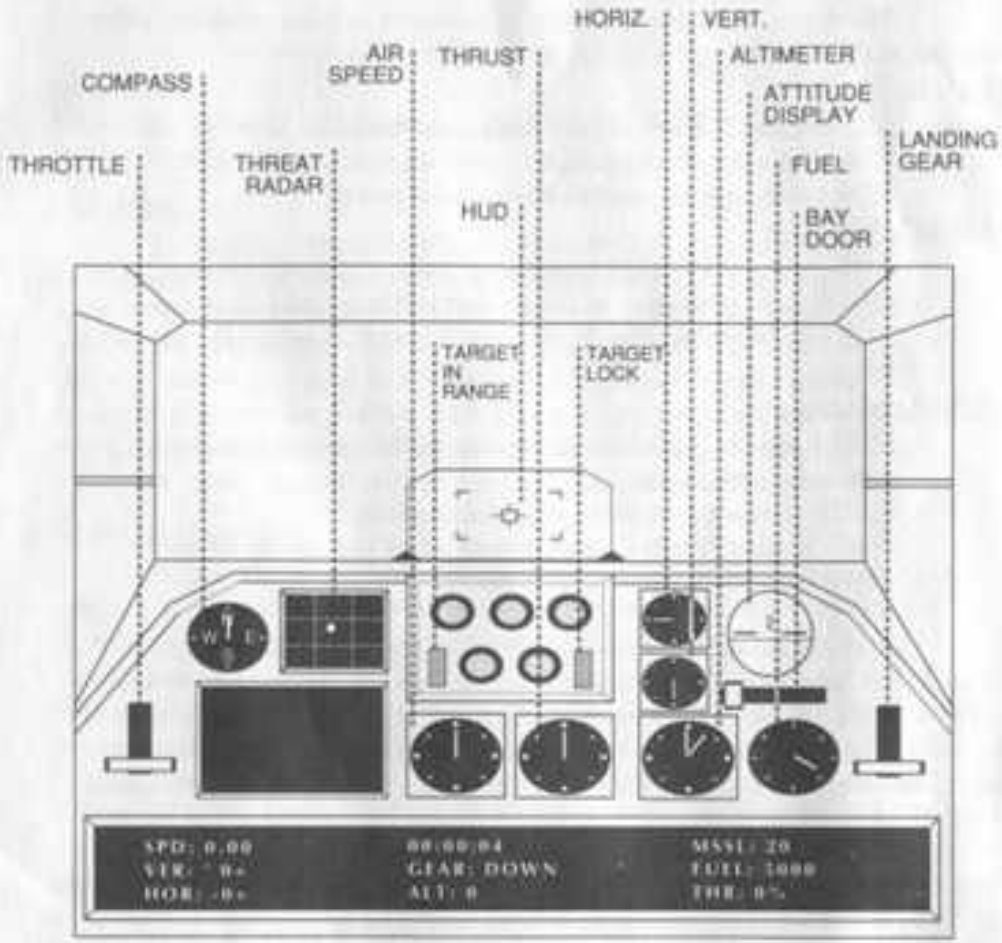
An easy way to remember how the joystick works is to think of it as a throttle when the left button is pressed and as a control yoke when the left button is not pressed.

Left button on:

Forward-	Starts engine and increases throttle whether flying or on the ground.
Back-	Decreases throttle when flying and reverses thrust if jet is on the ground (used for landing).

Left button off:

Left -	Moves jet left.
Right -	Moves jet right.
Forward-	Moves forward if taxiing Dives if flying.
Back-	Turns jet around if it is on the ground Climbs if flying.
Right Button	Fires missile.



Cockpit Control Panel

The aircraft cockpit includes all instrumentation actually found in the F-18/A fighter aircraft. It includes Altimeter, Air Speed Indicator, Horizontal and Vertical Indicators, Fuel Gauge, Engine Thrust Gauge, Missile Availability and Threat Radar. All instrumentation is rendered both graphically - gauge dials with working needles - and digitally at the bottom of the screen. Graphic levers indicate the condition of the landing gear (down or retracted), throttle and bomb racks. The pilot can even eject if the aircraft is fatally damaged by enemy fire.

The primary aiming device is a HUD (Heads Up Display) projected onto a transparent glass plate mounted over the cockpit. A Fire Control Computer alerts the player through two indicator lamps when a target is in firing range and when "missile lock" has been achieved (the missile's on-board radar has zeroed in on the target).

The digital instrument display is arranged in three columns at the bottom of the screen.

Left column:

SPD - indicates the air speed (measured in mach) of the aircraft.
VER - indicates, in degrees, the vertical angle of the aircraft.
HOR - indicates the aircraft's horizontal angle.

Middle column:

At the top is a digital clock which measures elapsed mission time.
GEAR: indicates status of the aircraft landing gear (up or down).
ALT: indicates the altitude, measured in feet, at which the aircraft is flying.

Right column:

MSSL - missile availability, indicates the number of remaining missiles on the aircraft.
FUEL - shows the amount of remaining fuel.
THR - Engine Thrust Gauge, measured by percentage of the aircraft's total engine thrust capability.

Each digital read out has a corresponding dial on the cockpit instrument panel (see cockpit diagram). If the aircraft is damaged by enemy fire the digital display is rendered inactive, but the F-18/A can still be flown by using the cockpit instruments. To learn this flying method, you should study the diagram and note the relative positions of the instruments while flying an undamaged jet.

The THREAT RADAR screen, located next to the compass on the upper left of the control panel, indicates the position of approaching ground and air threats well before they are within visible range.

Taxiing:

When the aircraft is on the ground you can taxi by pushing the joystick in the desired direction. Tap the joystick back to turn the plane around.

***Note:** the taxi mode offers the only way to turn around and fly back to where you came from.*

Take off:

To take off from a runway hold down on the left button and push the joystick forward. This will increase your thrust. When your speed gets greater than mach 0.32 release the button and pull back on the joystick. Once airborne you can control your altitude, direction and speed with the joystick.

***Note:** remember to leave enough room on the runway for the aircraft to get airborne.*

Landing gear:

Your landing gear goes up automatically after take off. To put it down again press the select key.
Note: *if you put your landing gear up when on the ground you will damage the aircraft.*

Landing:

To land, you must drop your thrust to 31% and put down your landing gear. Begin your descent by pushing the joystick forward. Your vertical attack angle should be -5.0 to -10.0, your horizon attack angle should be 0.0 and your airspeed should be less than 0.50 mach. Once on the ground hold down on the left button and pull back on the joystick to throttle down your engines. When your thrust reaches zero the engine will go into reverse. This allows you to come to a complete stop.
Note: *you cannot land on water or on rough looking terrain.*

Aircraft Carrier:

When taking off from an aircraft carrier (and you are locked into the catapult at the back of the ship) you must increase your thrust to 99% in order to be catapulted successfully from the carrier.

If you land on the "X" at the back of an aircraft carrier the F-18's arrestor hook will catch the carrier's cable and stop you automatically. At this point decrease your thrust (RPM) to 0% to shut down the engines. Moving the joystick releases the hook. It is also possible to land successfully without hitting the cable. To do this you must stop as quickly as possible or your plane will fall off the front of the carrier. To take off again, you must turn around (by pulling back on the joystick) and move up to the back of the carrier (which will allow enough take off room) If you move into the "X" on the back of the carrier a sound will indicate that you are locked into the catapult for take off.
Note: *slow yourself down well before reaching the aircraft carrier.*

Weapons:

To fire your missiles push the right joystick fire button. You take off with a total of 20 missiles for each mission. Targets are tanks, jets and helicopters. Destroying all targets increases your ranking. However, if you miss, avoid colliding with the target since this will damage your aircraft. Your radar display shows a long range view of approaching targets (see diagram). When a target is in range the left center light of the panel (see diagram) will blink. When the target is "locked" by computer the right light will blink.
Note: *to shoot moving ground targets you can either land or fly in the direction they are moving.*

Refueling:

To refuel you must land at designated fueling areas, as marked on the mission maps. Once your aircraft comes to a complete stop, refueling begins. When you are completely refueled the aircraft enters the taxi mode.
Note: there is no limit to the number of times you can refuel.

Payload:

Your F-18 will be carrying either supply cargo or bombs, depending on the mission. Dropping the payload is accomplished by using the left difficulty switch on the console. Throw the switch when you are directly over the target site. If you hit the target you will either hear the hit (cargo drop) or see the flash of an explosion (bomb drop). This will not happen if you miss.
Note: if you drop a bomb while on the ground you will blow yourself up!

Ejecting:

Throwing the right difficulty switch ejects you from the aircraft. You will save yourself by parachuting safely to the ground. This should only be done when you have no chance of surviving a crash landing. Ejecting from a crashing aircraft will increase your rank since the plane was lost but the pilot survived.
***Note:** ejecting while on the ground does not allow enough time for your parachute to open, consequently you will be killed.*

Ranking:

Your goal varies with each mission. Mission #1 is a training mission requiring that you fly to a designated area while destroying ground targets. The more complex missions have refueling sites and drop sites where you must drop your payload (bomb or supplies) inside a designated area.

Your score is based on the following six variables:

STATUS - whether you've completed the mission.
TARGETS - how many targets you've destroyed and whether you've successfully dropped your payload.
COURAGE - whether you've flown difficult maneuvers.
CRAFT - the condition of your jet at the end of the mission.
PILOT - pilot's condition at the end of the mission.
LANDING - if you've performed a textbook landing on a carrier deck.

The above information is compiled to determine your mission rank. An itemized list is available if you press the joystick forward during the ranking mode of the game. The possible ranks are as follows:

AWOL - Absent Without Official Leave
SWABO - Responsible for swabbing the deck of the aircraft carrier
CADET - An officer in training
ENSIGN - The lowest ranking navy officer
LIEUTENANT - A medium ranking navy officer
CAPTAIN - A high ranking navy officer
ACE - One of the navy's best pilots
TOP GUN - The best navy pilot (achieved by getting "ACE" on all 4 missions sequentially).

Special Hints:

Use the Intelligence Reports to learn of general altitudes of the carrier deck, bridges, hangars, etc. If you know the altitude you can align yourself well before you approach the site.

If you miss a target or landing area you can turn around. To do this, land at the next safe area and come to a complete stop. Pull back on the joystick to turn around, then take off again. You will now be flying back to the site.

If you are damaged once, your windshield will crack and your computer (digital) display will no longer work. If this happens, you must fly by instrumentation (dials, see diagram). To learn this flying method, study the diagram and note the relative positions of the instruments while flying an undamaged jet. Learning this method allows you to continue your quest for "Top Gun" or any other rank without restarting the game. Flying a damaged jet does not effect your ranking!

When destroying an enemy plane or helicopter, immediately move out of it's path after firing missiles so as not to get hit by debris or an enemy shot.

If you are damaged twice or run out of fuel, you lose most of your ship's controls. At this point it is still possible to land by holding back on the joystick. This controls your fall to a safe level. If you cannot perform a crash landing (because of terrain) you should eject. Both of these methods yield a higher score because you can save yourself and/or your craft.

To successfully achieve ACE ranking you must also perform maneuvers that will earn top courage ranking. These include flying under bridges and through hangars and gateways.

Reconnaisance:

The game has been designed so that you are not required to play for rank. There is no time limit and you can refuel as many times as you wish. Just for fun try exploring the scenery.

Examples:
Flying around the mesa's in Mission #1
Buzz the carrier at full throttle in Mission#2
Land on the canyon tops in Mission #3
Fly through the hangar at full throttle in Mission #4

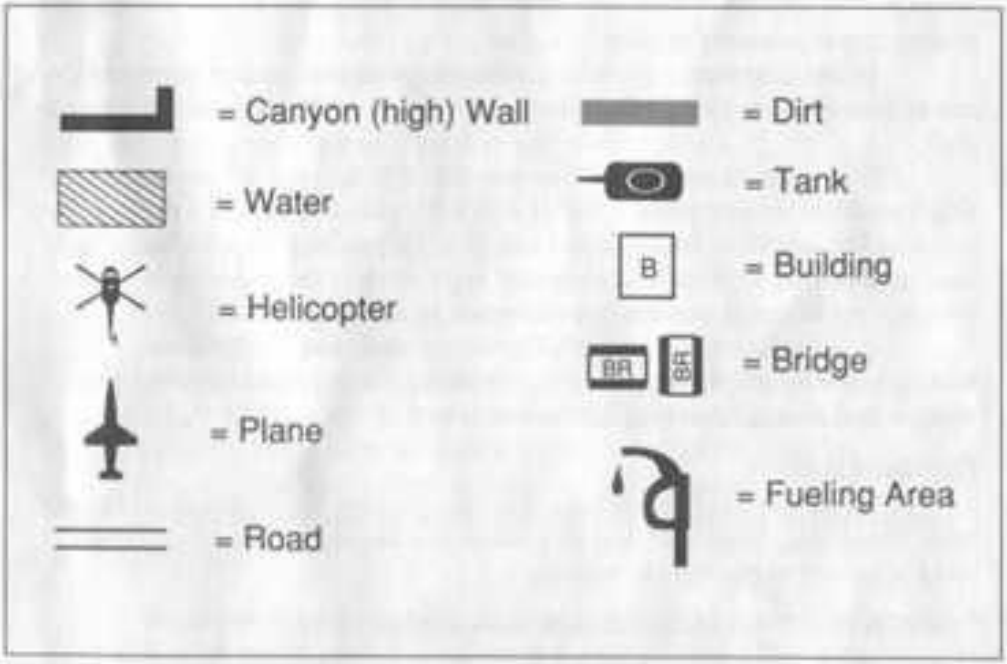
MISSIONS

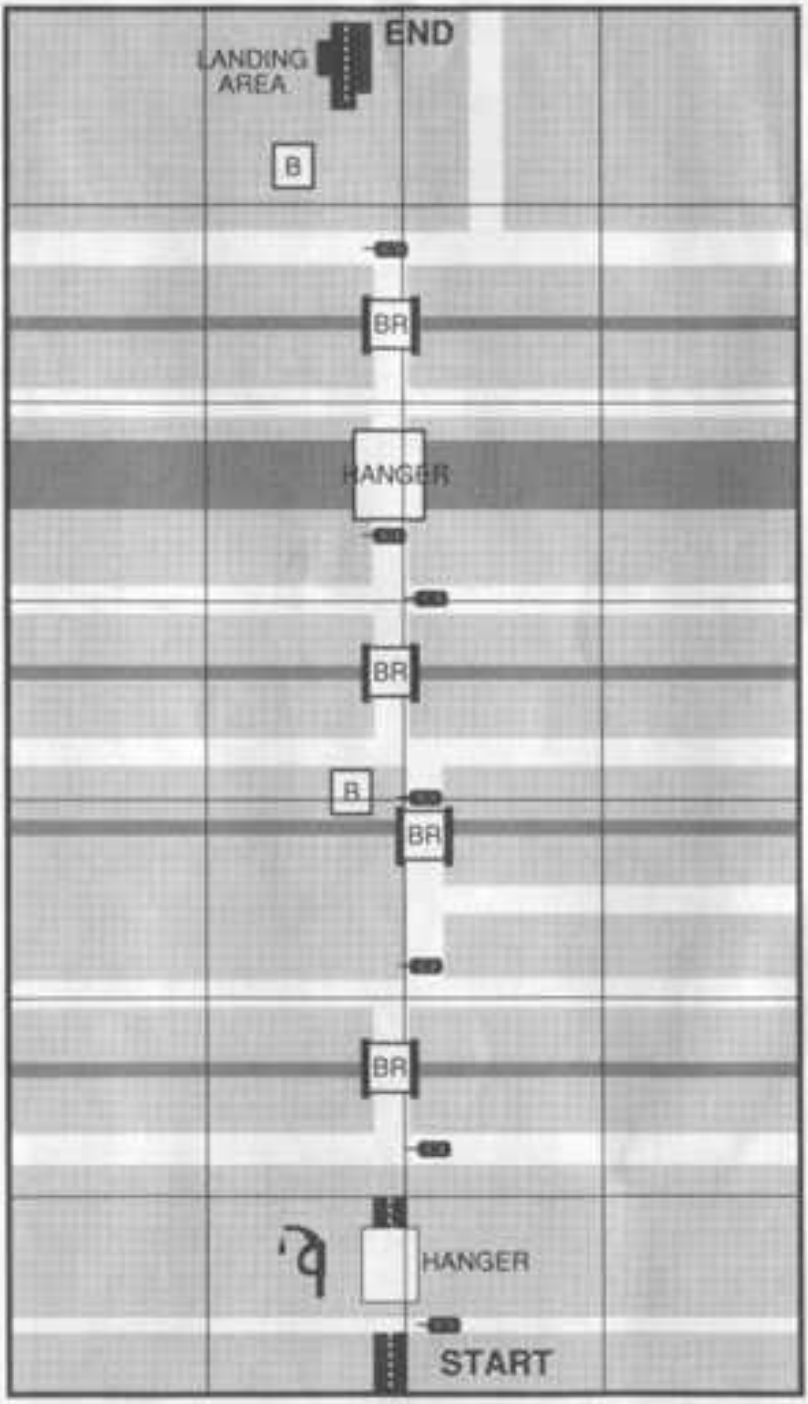
There are four (4) mission scenarios, each requiring the F-18/A pilot to take off, perform a number of flying maneuvers, destroy targets, and finally successfully land the aircraft. In order to achieve the ultimate rank of TOP GUN, you must complete each mission flawlessly (which will earn the rank of ACE) and in sequence.

MISSION #1: THE TRAINING MISSION

The first mission is a training run through the China Lake Naval Weapons Station in the Mojave Desert.

Take off from Miramar Naval Air Station in California (the actual Top Gun School). You must destroy a number of tank drone ground targets that have been placed along the flight path, buzz a hangar, fly around towering mesas, and finally land on a simulated aircraft carrier landing strip painted on the desert floor. The landscape is that of a typical southwestern desert, complete with towering 560 ft. mesas, dry sinks, roads, bridges and cactus.



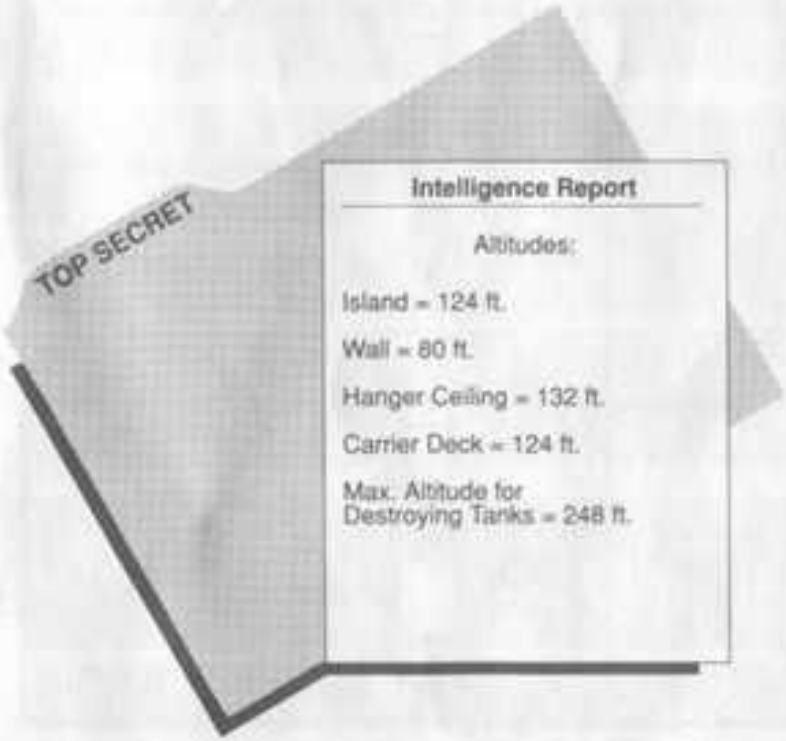

END
LANDING AREA
B
BR
HANGER
BR
B
BR
BR
HANGER
START

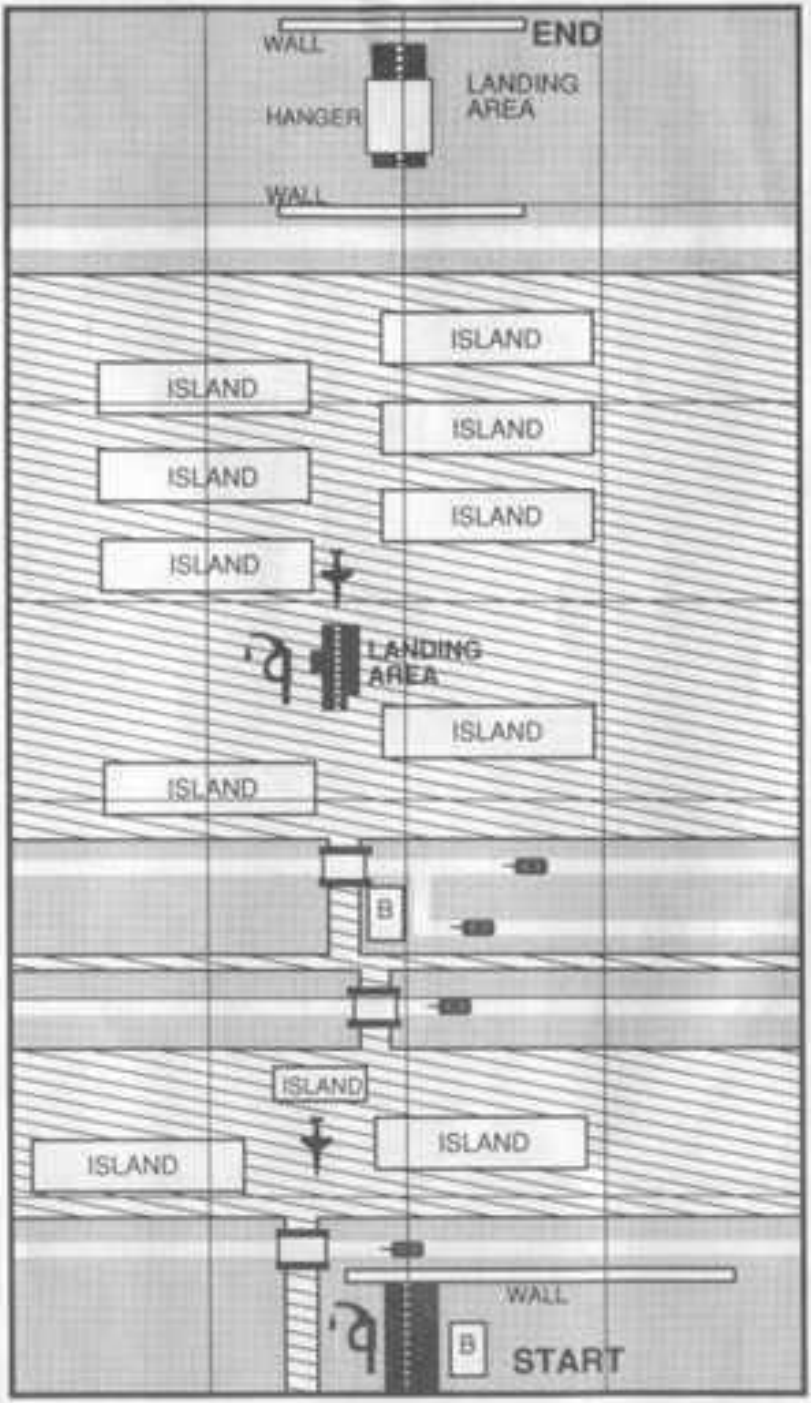
MISSION # 2: THE EUROPEAN MISSION

You are ordered into combat from a forward West German airbase to destroy Warsaw Pact forces advancing across the East-West border. After defeating all enemy ground and air forces, you must proceed out into the North Atlantic and attempt a dangerous carrier landing on the U.S.S. Enterprise.

If you execute the landing approach correctly with the proper Angle of Approach (AOA) to the carrier, maintain the proper landing speed and hit the carrier deck at the right moment, the aircraft's hook will catch the cable (a textbook landing). If not, you must try to decelerate with reverse thrust before reaching the end of the carrier deck.

After refueling on the U.S.S. Enterprise, you must launch and pilot your F-18/A to the hangar staging area to await further orders.

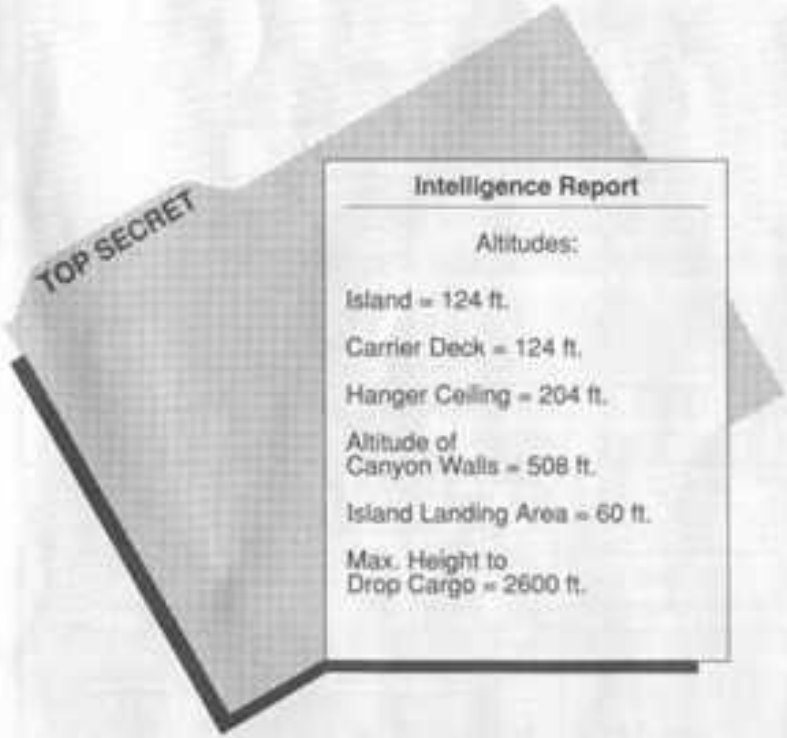


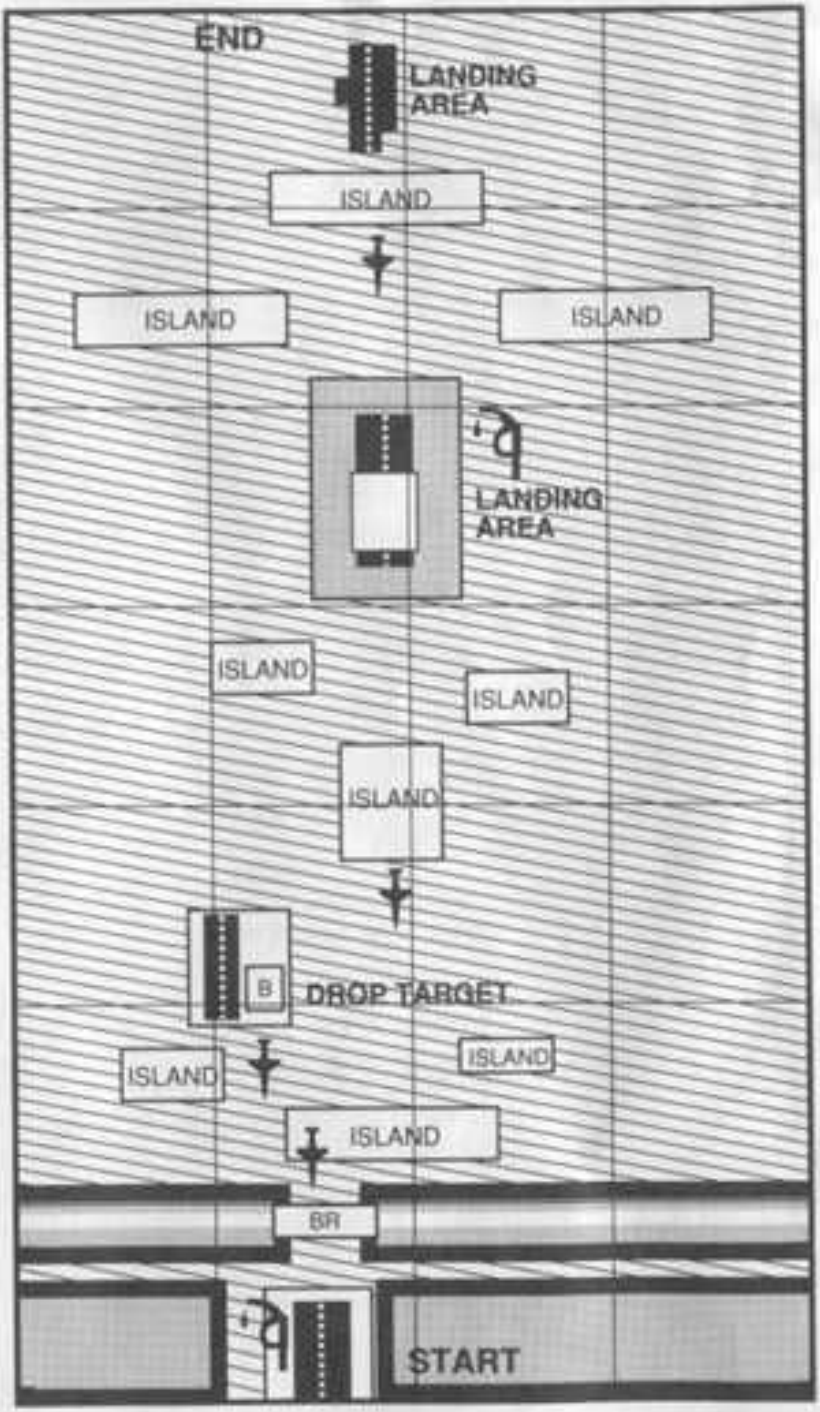

WALL
END
HANGER
LANDING AREA
WALL
ISLAND
ISLAND
ISLAND
ISLAND
ISLAND
ISLAND
LANDING AREA
ISLAND
ISLAND
B
ISLAND
ISLAND
ISLAND
WALL
B
START

MISSION #3: THE CENTRAL AMERICAN MISSION

You receive orders to fly a resupply mission to drop badly needed equipment to allied forces at a jungle HQ. The mission starts with take off through a river gorge toward allied HQ, encountering enemy MIGs along the way. Careful timing and the proper altitude are required in order to achieve a successful drop. After refueling at the island landing area, you head for another dangerous carrier landing on the U.S.S. Nimitz as in Mission #2.

Fly through the river gorge and under the bridge to earn highest courage ranking.

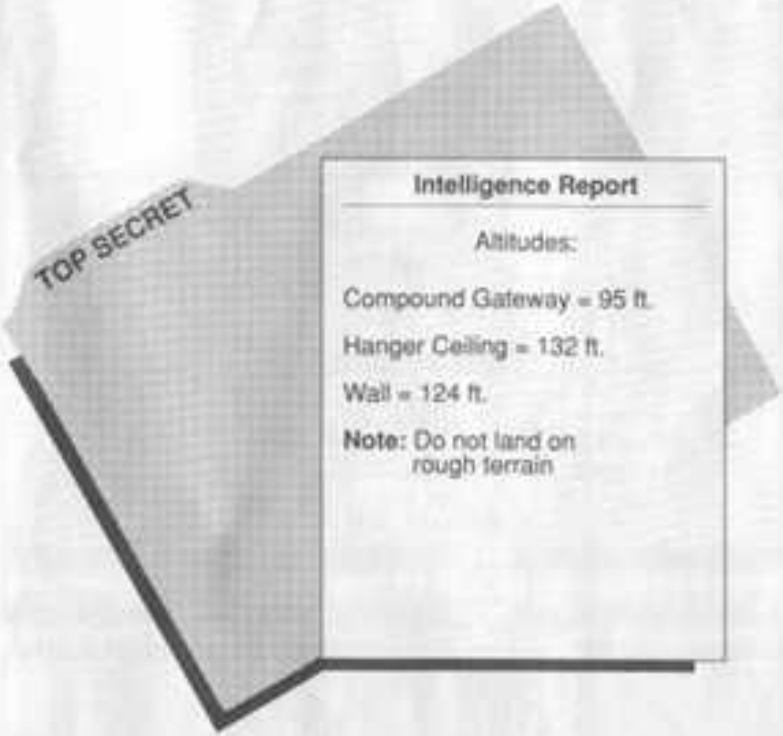


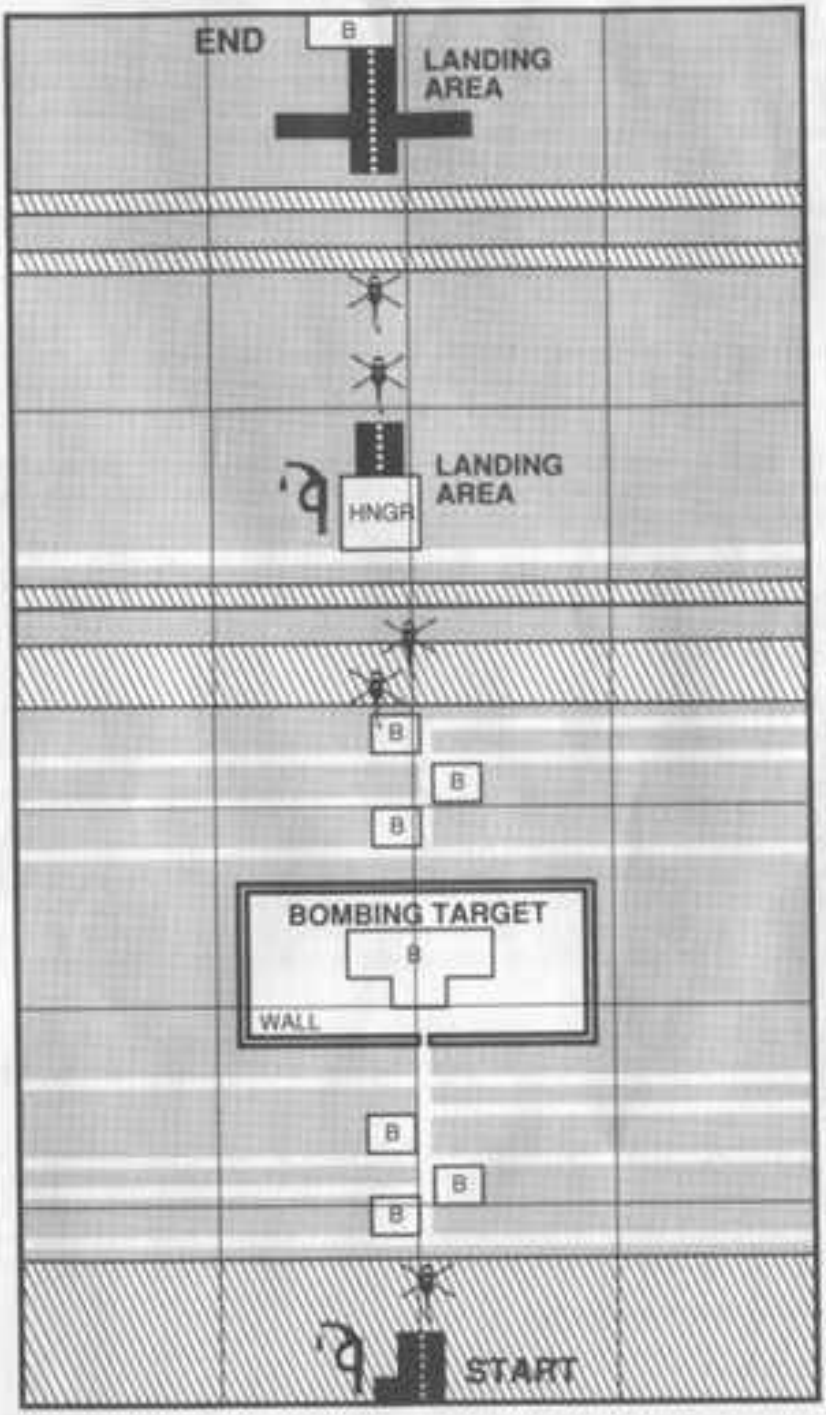

END
LANDING AREA
ISLAND
ISLAND
ISLAND
LANDING AREA
ISLAND
ISLAND
ISLAND
B
DROP TARGET
ISLAND
ISLAND
ISLAND
BR
START

MISSION #4: THE SOUTHEAST ASIA MISSION

The mission starts with a catapult take off from the U.S.S. Nimitz (requiring 99% thrust power) which is patrolling in the international waters off the coast of Southeast Asia. Encountering enemy helicopters along the way, you must bomb the enemy HQ and reach a refueling strip hidden in the jungle. After refueling, continue to the final destination at a forward jungle airstrip.

For top courage ranking, fly under the gateway before bombing the enemy HQ.




END
B
LANDING AREA
LANDING AREA
HNGR
B
B
B
BOMBING TARGET
B
WALL
B
B
B
START

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